

element 011: db design, implementation and programming

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# 1.0 INTRODUCTION

Km’s travels and tours is a travelling agency that needs a website that will make their company digitalised. The company require a website that will give passengers the access to book their flight online, plan their flights, and find the best deals of travels.

***Aims***: to construct a well-structured, and functionable database driven application that will allow passengers to make bookings online and find offers.

This paper covers the detailed business description: that explains the services of the company, it explains the benefits of database-driven application, it provides evidence of more understanding in the part of work by providing more details about the business, it also showcases the attributes and entities of the database. It creates a class diagram to visualise the database, the paper provides different screenshots of run.

# 2.0 Business Description

Km’s travels and tours is a web-based business to customer organisation that provides services to different kind of passengers, the company is in kano, Nigeria formed in the year 2021. In the travelling agency organisation having a developed web-based application have a major role in the industry, having a well structure and functioning web application pleases the passengers as it makes their booking experience easy and simple. Km’s travels and tours is a travel agency that helps in plan, choosing, and arranging trips for clients.

2.1 Km’s travels and tours deliverables

The company offers services that include:

1. Flight tickets booking flight bookings are the number one deliverable of any travelling agency and it goes for km’s travels and tours, a passenger is to look for flight availability and any source of packages before continuing to book a flight of choice.
2. Traveling packages: these packages are a bundle that provides affordable adventures that goes with different occasions, these packages include:

* Holiday package: this package offers special bundle for holidays like Christmas/new year’s holiday, and valentines. Km’s travels and tours organise a memorable adventure to do during the trip to make passengers enjoy their vacation.
* Honeymoon package: the honeymoon package is the most popular package of all as it is the one that couple always choose either to celebrate their first wedding phase, anniversary or just out of love. The company organise a romantic getaway for two where they will enjoy their stay by doing activities together in a romantic setting, this holiday is one a couple hardly forgets thus it is taken serious by the company.
* Family bundle: a family getaway is always the best way to express your love and gratitude to your loved ones. In this case every activity organises for the family it is in a way that no family member will feel left out which is why a customer is to add several passengers when making reservations.
* Royalty package: this package is mostly booked by the high-end citizens or celebrities, it is the most expensive package with the most adventurous activities organised, such as skydiving, concerts reservations, and red-carpet bookings. It also gives a passenger the right to as for any other reservations beforehand. The passengers are accommodated in a five-star hotel and gourmet foods are served with a tour guide to give a tour of the city.
* Tourist trust: this package is mostly reserved by tourists as it feels most of what they need while visiting a city or country, it offers a tour guide, a hotel in the city centre and it is affordable and reliant.

These packages are just options for passenger, if a passenger want to make additions in their package, they can request for it and vis-versa.

1. Reservations: km’s travels and tours offer reservations of accommodation, cars, restaurants, events, and any reservation of choice. These reservations are optional to passengers, but it makes the trip more convenient, and it is affordable. A passenger can choose to reserve everything through the airline or just a few or even ask for some sort of reservation that is not in the reservation list and the airline can confirmed the request or deny it. A passenger can get a discount after adding the reservations with his flight bookings.
2. Visa processing: the company only assist a passenger to process a visa when requested. Visa processing is a third party deal it is not highly recommended, but it can be done when requested.

|  |
| --- |
| **Passengers** |
| Passenger\_id |
| Username |
| Password |
| Title |
| Firstname |
| Surname |
| Date\_of\_birth |
| Email |
| gender |
| Phone\_number |
| Address |
| City |
| Postcode |

|  |
| --- |
| **Passports** |
| Passport\_id |
| Firstname |
| Surname |
| Nationality |
| Expiry\_date |
| Country\_code |
| Passport\_num |

|  |
| --- |
| **Packages** |
| Package\_id |
| Package\_name |
| Package\_cost |
| Passenger\_fk |

|  |
| --- |
| **Tickets** |
| Ticket\_id |
| Passenger\_fk |
| Seat\_num |
| Flight\_num |
| Travel\_date |
| Return\_date |

|  |
| --- |
| **Bookings** |
| Booking\_id |
| Package\_fk |
| Passport\_fk |
| Passenger\_fk |
| Visa\_fk |

|  |
| --- |
| **Hotels** |
| Hotel\_id |
| Hotel\_name |
| Hotel\_add |
| Room\_num |
| Passenger\_fk |

|  |
| --- |
| **Visas** |
| Visa\_id |
| Passenger\_fk |

## 3.0 EMPLOYEE ROLES

The company recruit employees that include:

TRAVEL AGENT: a travel agent is the person that assist the client in planning their trips from the start to the finish. The agent listens to the client’s ideas on how they expect their trip to be and how much their budget is, the agent is to present them with ideas that match their preference and budgets. After the clients confirm their preferred holiday, the agent goes ahead to plan their clients flight tickets, car rentals, accommodation, and anything else they will require for their trip.

CORPORATE TRAVEL CONSULTANT: corporate travel consultant works in a travel agency, and they deal with medium or large companies. Their job many include making plans of a business trips for employees, planning travels for the company, conference, and conventions. A corporate travel consultant is more knowledgeable of meeting spaces and banquet halls, as well as finding places suitable to hold meetings and business events. It is the corporate travel consultant job to book for travels and find a way to make both parties entertained during their business meetings this can be by booking outings like golf and horse riding.

OFFICE MANAGER: every office is required to have a manager and it is no difference in a travelling agency. An office manager is responsible in over seeing what is necessary to keep the business running smoothly on the inside of the company. Their role gives them the power to hire staff or fire them, purchase supplies and equipment, in some cases they are entitled to change plans in a situation that is needed. An office manager of km’s travels and tours must have experience of the travelling industry, this experience is needed because the manager might be required to help the travel agent or corporate travel consultant in planning trips. The manager can also be included in payrolls and collecting fees from clients.

OFFICE ADMINISTRARTOR: the admin is the person in charge of compiling reports, controlling the firm’s database, maintaining common spaces and assists other staffs in the office. They also schedule interviews for the human resources manager, staff orientation, maintaining, office schedules and securing office supplies.

ACCOUNTING: the accountants manage the incomes that comes in and out of the company accountant. They keep the company in budgets requested by the board of trustees. They also maintain the books of reports of income, pay-outs, insurance claims and other expenditures of the agency.

SOFTWARE MANAGER: this is the person in charge of managing the computer programs and software, they make sure that the company website is up to date and SOFTWARE MANAGER: this is the person in charge of managing the computer programs and software, they make sure that the company’s website is up to date, and it is running smoothly. Software programmer oversees updating the website software, managing any suggestion required from the upper management.

SOCIAL MEDIA MANAGER: a social media manager is the person in charge of the social media accounts of the company such as twitter, Instagram, and Facebook. They answer any social media comments and questions clients have regarding the travelling agency. They are to keep up the number of followers in every social media account high and to advertise the company online. Social media manager person is the face of the company online, their job as creators is supposed to create posts or tweets to keep making traffic in the social media accounts.

# 4.0 BENEFITS OF THE END USER DESIGN IMPLEMENTATION

* It is faster to design the implementation cycle
* It reduces the risk of communication malfunction between the user and the information system.
* End user free the information system from the burden of higher priority projects.
* Users understands and accept it better.
* In some scenario it helps to reduce the hidden backlog
* End user supports innovation and more smart and creative solutions.

# 5.0 Class diagram

Diagram

Description automatically generated

# 6.0 ENTITY RELATION DIAGRAM

An entity relation diagram (ERD) is the type of structural diagram that is design to explain and understand database design better. It shows the relationship between database table and foreign keys.

Graphical user interface, application

Description automatically generated

# 07 APPLICATION SCREENSHOTS

Graphical user interface

Description automatically generated

Visual studio is the software that is used to design the database driven application using c#

A picture containing text, monitor, screenshot, indoor

Description automatically generated

This is a form or a class that showcase the attributes that each form has and their functionality. The form is connected to the database to show the activities of passengers.

A screenshot of a computer

Description automatically generated

This is the code of the customer list where the manager is allowed to make changes in their system without interrupting the user’s system functionality.

A screenshot of a computer

Description automatically generated

This is the result that shows the manager making changes to the passenger or customer list

A screenshot of a computer

Description automatically generatedA screenshot of a computer

Description automatically generatedA screenshot of a computer

Description automatically generated

This are the codes that perform the task of bringing out data from the database. It is done by connecting the database to the visual studio.

# 0.8 CONCLUSION

In conclusion this report is written to elaborate the understanding of database-driven application and the explanation of travelling agent business. The report focused on the business and the back-end website and did a decent job in explaining both.